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Docket 83891BTJS  
Customer No. 01333

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of

David L. Patton, et al

METHOD FOR MARKING  
GEMSTONES WITH A UNIQUE  
MICRO DISCRETE INDICIA

Serial No. 10/607,185

Filed June 26, 2003

Group Art Unit: 3677  
Confirmation No. 5366  
Examiner: David C. Reese

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Paula West

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Sir:

**APPEAL BRIEF TRANSMITTAL**

Enclosed herewith is Appellants' Appeal Brief for the above-identified  
application.

The Commissioner is hereby authorized to charge the Appeal Brief filing  
fee to Eastman Kodak Company Deposit Account 05-0225. A duplicate copy of  
this letter is enclosed.

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Enclosures

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the  
Examiner is requested to communicate with Eastman Kodak Company Patent Operations at  
(585) 477-4656.

Respectfully submitted,

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**APPEAL BRIEF PURSUANT TO 37 C.F.R. 41.37 and 35 U.S.C. 134**

## **Table Of Contents**

<u>Table Of Contents</u> .....	i
<u>Real Party In Interest</u> .....	1
<u>Related Appeals And Interferences</u> .....	1
<u>Status Of The Claims</u> .....	1
<u>Status Of Amendments</u> .....	1
<u>Summary of Claimed Subject Matter</u> .....	2
<u>Grounds of Rejection to be Reviewed on Appeal</u> .....	2
<u>Arguments</u> .....	3
<u>Summary</u> .....	8
<u>Appendix I - Claims on Appeal</u> .....	9
<u>Appendix II - Evidence</u> .....	10
<u>Appendix III – Related Proceedings</u> .....	11

## **APPELLANT'S BRIEF ON APPEAL**

Appellant hereby appeals to the Board of Patent Appeals and Interferences from the Examiner's Rejection of claims 1 and 4-6, which was contained in the Office Action mailed June 6, 2006.

A timely Notice of Appeal was filed September 1, 2006.

### **Real Party In Interest**

As indicated above in the caption of the Brief, the Eastman Kodak Company is the real party in interest.

### **Related Appeals And Interferences**

No appeals or interferences are known which will directly affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

### **Status Of The Claims**

Claims 1 and 4-6 are pending in the application

Appendix I provides a clean, double-spaced copy of the claims 1 and 4-6 on appeal.

### **Status Of Amendments**

Initial Office Action mailed June 3, 2004

Amendment mailed August 23, 2004

Final Office Action mailed November 15, 2004.

116 Amendment mailed January 11, 2005

Advisory Action mailed February 11, 2005

Notice of Appeal mailed February 15, 2005

Request for Continued Examination mailed April 12, 2005

Preliminary Amendment mailed April 12, 2005

Office Action mailed June 29, 2005

Amendment mailed August 12, 2005

Final Office Action mailed October 19, 2005

Request for Continued Examination mailed February 8, 2006

Amendment mailed February 8, 2006

Notice of Non-Compliant Amendment mailed April 18, 2006

Amendment mailed May 15, 2006

Office Action mailed June 6, 2006

Notice of Appeal mailed September 1, 2006.

An amendment was faxed November 1, 2006 but has not been entered at the time of filing this Appeal Brief.

### **Summary of Claimed Subject Matter**

With respect to claim 1, Appellant's invention relates to a gemstone having a micro-discrete indicia formed on a surface of said gemstone. *See* page 4, lines 25-28. More particularly, the invention requires that a micro-discrete indicia image is formed using near-field optics (*See* page 4, lines 25-28), wherein said micro-discrete indicia image has a length  $d$  no greater than about 10 microns and a height  $h$  no greater than about 2 microns. *See* page 4, lines 24-30 and Fig. 3. The gemstone has an altered color at the location of said micro-discrete indicia without ablating the surface of said gemstone, the altered color results from said near-field optics forming said micro-discrete indicia image. *See* page 5, line 31 – page 6, line 8. Accordingly, the invention is directed to providing a gemstone having extremely small indicia that does not affect the quality of the gemstone yet can provide identification of the gemstone. It is extremely important that there is no perceivable damage to the gemstone, which is accomplished using near-field optics to produce the indicia.

### **Grounds of Rejection to be Reviewed on Appeal**

The following issues are presented for review by the Board of Patent Appeals and Interferences:

1. Whether the invention of claims 1 and 4-6 is patentable under 35 U.S.C. 103(a) over Smith (US 6,187,213) in view of case law and further in view of Appellant's own disclosure.

## **Arguments**

### **REJECTIONS UNDER 35 U.S.C. 103(a) OVER SMITH (US 6,187,213) IN VIEW OF CASE LAW AND FURTHER IN VIEW OF APPELLANT'S OWN DISCLOSURE.**

#### **CLAIMS 1 AND 4**

**CLAIMS 1 AND 4 ARE PATENTABLE OVER SMITH (US 6,187,213) IN VIEW OF CASE LAW AND FURTHER IN VIEW OF APPELLANT'S OWN DISCLOSURE BECAUSE CITED REFERENCES, ALONE OR IN COMBINATION, FAIL TO SHOW ALL OF THE ELEMENTS REQUIRED BY CLAIMS 1 AND 4.**

- a. SMITH IN VIEW OF CASE LAW AND FURTHER IN VIEW OF APPELLANTS' OWN DISCLOSURE DOES NOT DISCLOSE, EXPRESSLY OR INHERENTLY, AT LEAST A MICRO-DISCRETE INDICIA IMAGE HAVING A LENGTH NO GREATER THAN ABOUT 10 MICRONS AND A HEIGHT NO GREATER THAN ABOUT 2 MICRONS AS REQUIRED BY INDEPENDENT CLAIM 1.**

Smith fails to teach or suggest at least micro-discrete indicia image formed using near-field optics, wherein said micro-discrete indicia image has a length no greater than about 10 microns *and* a height no greater than about 2 microns. Rather, Smith discloses that a mark has a line width of 1.5-3 microns (*See* Col. 4, lines 62-65 and Col. 10, lines 57-59) *and* a height of approximately 50 microns. *See* Col. 4, lines 62-65; Col 10, lines 54-55. Accordingly, even if the character line of Smith were interpreted as a whole character having a width of 1.5-3 microns, the height of Smith's character would still be approximately 50 microns. Furthermore, any orientation of Smith's mark would fail to meet Appellant's length *and* width requirement, e.g., rotating Smith's mark 90 degrees.

Appellant's admitted prior art (AAPA) and case law fail to remedy the deficiencies of Smith as AAPA and the cited case law also fail to teach or suggest at least micro-discrete indicia image formed using near-field optics, wherein said micro-discrete indicia image has a length no greater than about 10 microns *and* a height no greater than about 2 microns. Appellant's admitted prior art does not

teach marking a gemstone using near-filed optics. *See* page 2, line 21-22. Accordingly, AAPA does not disclose near-field optics forming micro-discrete indicia image on a gemstone as required by Appellant's independent claim 1.

**b. SMITH IN VIEW OF CASE LAW AND FURTHER IN VIEW OF APPELLANT'S OWN DISCLOSURE DOES NOT DISCLOSE, EXPRESSLY OR INHERENTLY, AT LEAST A GEMSTONE HAVING AN ALTERED COLOR RESULTING FROM SAID NEAR-FIELD OPTICS FORMING SAID MICRO-DISCRETE INDICIA ON IMAGE ON SAID GEMSTONE AS REQUIRED BY INDEPENDENT CLAIM 1.**

Smith fails to teach or suggest at least a gemstone having an altered color at the location of said micro-discrete indicia without ablating the surface of said gemstone, said altered color resulting from said near-field optics forming said micro-discrete indicia image. Rather, Smith discloses ablating a diamond to make shallow marks in the diamond and avoiding undesirable darkening in the marks due to phase transformation. Col. 4, lines 21-23 and Col. 4, line 65 – Col. 5, line 5.

Appellant's admitted prior art (AAPA) and case law fail to remedy the deficiencies of Smith as AAPA and cited case law also fail to teach or suggest at least a gemstone having an altered color at the location of said micro-discrete indicia without ablating the surface of said gemstone, said altered color resulting from said near-field optics forming said micro-discrete indicia image. More specifically, AAPA discloses that it is known to those skilled in the defect physics of such materials that either through direct light absorption into existing defect optical absorption bands or through multi-photon absorption processes, color center can be produced in these materials. However, AAPA also discloses the prior art does not teach marking a gemstone using near-filed optics. *See* page 2, line 21-22. Accordingly, AAPA cannot teach forming micro-discrete indicia image on a gemstone by altered color resulting from the near-field optics as required by Appellant's independent claim 1.

**c. CONCLUSION**

Accordingly, Smith, case law and AAPA do not teach, expressly or inherently, the above limitation. Therefore, Appellant respectfully submits that claim 1 is patentable over the cited references. Because claim 4 depends from claim 1 and includes the features recited in the independent claim, Appellant respectfully submits that claim 4 are also patentably distinct over the cited reference.

**CLAIMS 5 AND 6**

**CLAIMS 5 AND 6 ARE PATENTABLE OVER SMITH (US 6,187,213) IN VIEW OF CASE LAW AND FURTHER IN VIEW OF APPELLANT'S OWN DISCLOSURE BECAUSE CITED REFERENCES, ALONE OR IN COMBINATION, FAIL TO SHOW ALL OF THE ELEMENTS REQUIRED BY CLAIMS 5 AND 6.**

- a. SMITH IN VIEW OF CASE LAW AND FURTHER IN VIEW OF APPELLANT'S OWN DISCLOSURE DOES NOT DISCLOSE, EXPRESSLY OR INHERENTLY, AT LEAST SAID MICRO-DISCRETE INDICIA PROVIDES INFORMATION WITH REGARD TO SAID GEMSTONE AS REQUIRED BY CLAIMS 5 AND 6.**

Appellant's claims 5 and 6 depend from independent claim 1 and include the features recited in independent claim 1 as well as additional features.

Smith fails to teach or suggest at least a said micro-discrete indicia provides information with regard to said gemstone, wherein said information comprises any of the following: size, type, manufacturer, retailer, owner, producer, country of origin, mine. Rather, Smith discloses that a mark has a line width of 1.5-3 microns (*See* Col. 4, lines 62-65 and Col. 10, lines 57-59) *and* a height of approximately 50 microns. *See* Col. 4, lines 62-65; Col 10, lines 54-55. The Office Action asserts, "the character line [in Smith] is interpreted as the indicia, as opposed to the whole character." *See* page 3 of Office Action dated June 6, 2006. However, Smith does not disclose that information with regard to a gemstone, such as size, type, manufacturer, retailer, owner, producer, country of



origin or mine, can be formed within the line width of a character. Smith merely discloses that the line width used to form characters is 1.5-3 microns.

Appellant's admitted prior art (AAPA) and case law fail to remedy the deficiencies of Smith as AAPA and case law also fail to teach or suggest at least said micro-discrete indicia provides information with regard to said gemstone, wherein said information comprises any of the following: size, type, manufacturer, retailer, owner, producer, country of origin, mine. Appellant's admitted prior art does not teach marking a gemstone using near-field optics. *See* page 2, line 21-22. Also, AAPA does not disclose near-field optics forming micro-discrete indicia image on a gemstone, said micro-discrete indicia provides information with regard to said gemstone as required by Appellant's claims 5 and 6.

**b. THE MICRO-DISCRETE INDICIA IS  
FUNCTIONALLY RELATED TO  
APPELLANT'S PRODUCT.**

Appellant does not agree with Examiner's assertion "that the printed matter is not functionally related to the product." Appellant submits, with respect to claims 5 and 6, that the micro-discrete indicia provide information with regard to the gemstone. This specifies the required functional relationship to carry out Appellant's invention and clearly defines the disclosed invention as required by section 112. "The fact that printed matter *by itself* is not patentable subject matter, because non-statutory, is no reason for ignoring it when the claim is directed to a combination." *In re Miller*, 418 F.2d 1392, 1395; 164 USPQ 46, 48 (1969) (A new and unobvious functional relationship between a measuring receptacle, volumetric indicia thereon indicating volume in a certain ratio to actual volume, and a legend indicating the ratio.)

In addition, Appellant respectfully disagrees with the Office Actions assertion that "one of ordinary skill in the art would appreciate that a modification such as a mere change in size of a component would be obvious." Appellant respectfully submits that the Examiner bears the burden of establishing a *prima facie* case of obviousness based upon the prior art. The mere fact that the

prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Gordon, 733 F.2d at 902, 221 USPQ at 1127. For example, the cited art fails to disclose near-field optics forming a micro-discrete indicia image on a gemstone providing size, type, manufacturer, retailer, owner, producer, country of origin or mine with respect to the gemstone, said micro-discrete indicia image having a length no greater than about 10 microns *and* a height no greater than about 2 microns. Appellant's invention provides a gemstone having extremely small indicia that does not affect the quality of the gemstone yet can provide information with respect to the gemstone. In *Toledo Computing Scale Co. v. Computing Scale Co.*, the Court granted a patent covering capillary tubing, as the new tubing was effective only by reason of its size. 208 F. 410 (C.C.A. 1913) (The reduction in the cross-sectional area of the tubing converted failure into success, and involved something more than a matter of degree).

**c. CONCLUSION**

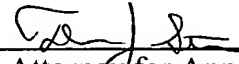
Accordingly, Smith, case law and AAPA do not teach, expressly or inherently, the above limitation. Therefore, Appellant respectfully submits that claims 5 and 6 are patentable over the cited references.

**Summary**

For the above reasons, Appellant respectfully requests that the Board of Patent Appeals and Interferences reverse the rejection by the Examiner and mandate the allowance of Claims 1 and 4-6.

Respectfully submitted,

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Enclosures

  
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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.

## **Appendix I - Claims on Appeal**

1. A gemstone having a micro-discrete indicia formed on a surface of said gemstone wherein said micro-discrete indicia image was formed using near-field optics, wherein said micro-discrete indicia image has a length no greater than about 10 microns and a height no greater than about 2 microns, said gemstone having an altered color at the location of said micro-discrete indicia without ablating the surface of said gemstone, said altered color resulting from said near-field optics forming said micro-discrete indicia image.

4. The gemstone according to claim 1, wherein ~~in~~ said micro-discrete indicia is provided at a predetermined coordinates on said gemstone.

5. The gemstone according to claim 1, wherein said micro-discrete indicia provides information with regard to said gemstone.

6. The gemstone according to claim 5, wherein said information comprises any of the following:

size, type, manufacturer, retailer, owner, producer, country of origin, mine.

## **Appendix II - Evidence**

None

### **Appendix III – Related Proceedings**

None